



Esophageal balloon cytology and subsequent risk of esophageal and gastric-cardia cancer in a high-risk Chinese population

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Abstract: Linxian, China has some of the highest rates of esophageal/gastric cardia cancer in the world. In 1983, esophageal balloon cytology screening was performed in 3 communes in northern Linxian. Of the participants, 10,066 with no evidence of cancer were followed prospectively for 7 1/2 years to evaluate the ability of the initial cytologic diagnoses to identify individuals at increased risk for developing cancer of the esophagus or gastric cardia. A total of 747 incident cases of esophageal or cardia cancer and 322 deaths due to these tumors were identified during the follow-up period and used in this analysis. The risks for esophageal or cardia cancer incidence and mortality increased in parallel with the presumed severity of the 1983 Chinese cytologic diagnoses. After adjusting for potential confounding factors, relative risks for esophageal or cardia cancer incidence, by initial cytologic diagnosis, were normal = 1.00 (reference), hyperplasia = 1.25, dysplasia 1 = 2.20, dysplasia 2 = 4.22 and near-cancer = 5.96. Our results suggest that esophageal balloon cytology, as performed and interpreted in Linxian in 1983, successfully identified individuals at increased risk for developing cancer of the esophagus or gastric cardia.